

.NET DEVELOPER INTERVIEW ASSIGNMENT

Overview:

The test is to create a C# Windows console application that allows a user to enter a gross salary package and a pay frequency and then show them a breakdown of this salary and what their pay packet will be.

Please make your code available in an online repository such as BitBucket or GitHub, do not email the code to us. Ensure that you include a readme with your code that details the 'why' of your coding decisions as well as how the application could be extended if the income rules change or if it were to consider future and past years.

The example provided in this assignment is correct and so if your output does not match ensure you provide some reasons why that may be the case.

Programming considerations:

- Encapsulation
- Code class structure including interfaces, abstract classes, etc. if appropriate
- Exception handling
- Handling of user input errors
- Readability and maintainability
- Comments (useful ones)
- Coding design patterns
- Separation of concerns
- Ability to extend and handle changes in tax laws

Details:

- User will be asked to enter gross package, the gross package is inclusive of superannuation
- User will be asked to enter a pay frequency (weekly, fortnightly or monthly)
- Salary breakdown will show:
 - Gross package (annual)
 - Superannuation contribution (annual)
 - Taxable income (annual)
 - List of deductions and their annual amount, deductions included:
 - ♦ Medicare Levy
 - ♦ Budget Repair Levy
 - ♦ Income tax
 - Net income (annual)
 - Pay packet amount
- Application needs to cater for invalid user entry gracefully
- Application should format values as currency

Income rules:

1. Taxable income (TI) is gross package minus superannuation contribution and is **rounded down to the nearest dollar when calculating deductions**.
2. Super contribution is 9.5% - note that the value entered by the user is the full package which is inclusive of super. E.g. package of \$50,000 includes super of \$4,338. **Super should be rounded up to the nearest cent and is based on an unrounded Taxable income**.

3. Medicare Levy (**always rounded up to the nearest dollar**):

Taxable income range	Medicare Levy	Example
\$0 - \$21,335	0%	0
\$21,336 – \$26,668	10% of the excess over \$21,335	TI = \$25,000, Levy = $25000 - 21335 * 10\% = \$366.50$ (\$367)
\$26,669 and over	2% of taxable income	TI = \$40,000, Levy = $40000 * 2\% = \$800$

4. Budget Repair Levy (**always rounded up to the nearest dollar**):

Taxable income range	Budget Repair Levy	Example
\$0 - \$180,000	0%	0
\$180,001 and over	2% of the excess over \$180,000	TI = \$200,000, Levy = $200000 - 180000 * 2\% = \400

5. Income Tax: (**always rounded up to the nearest dollar**)

Taxable income range	Income Tax amount	Example
\$0 - \$18,200	0%	0
\$18,201 – \$37,000	19% of the excess over \$18,200	TI = \$25,000, Tax = $25000 - 18200 * 19\% = \$1,292$
\$37,001 - \$87,000	\$3,572 + 32.5% of the excess over \$37,000	TI = \$45,000, Tax = $\$3,572 + (45000 - 37000 * 32.5\%) = \$6,172$
\$87,001 - \$180,000	\$19,822 + 37% of the excess over \$87,000	TI = \$95,000, Tax = $\$19,822 + (95000 - 87000 * 37\%) = \$22,782$
\$180,001 and over	\$54,232 + 47% of the excess over \$180,000	TI = \$200,000, Tax = $\$54,232 + (200000 - 180000 * 47\%) = \$63,632$

6. Net income is Gross package – super – deductions
7. Pay packet amount is Net salary for the specified pay frequency, i.e. weekly, fortnightly or monthly take home amount and is **rounded up to the nearest cent**.

Example output

Enter your salary package amount: 65000

Enter your pay frequency (W for weekly, F for fortnightly, M for monthly): M

Calculating salary details...

Gross package: \$65,000

Superannuation: \$5,639.27

Taxable income: \$59,360.73

Deductions:

Medicare Levy: \$1,188.00

Budget Repair Levy: \$0

Income Tax: \$10,839.00

Net income: \$47,333.73

Pay packet: \$3,944.48 per month

Press any key to end...